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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,676	03/12/2002	Keishi Ikeda	21334-1125	8217

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EXAMINER
LEON, EDWIN A

ART UNIT	PAPER NUMBER
2833	

DATE MAILED: 04/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/092,676	Applicant(s) IKEDA ET AL.	
	Examin r Edwin A. León	Art Unit 2833	

-- The MAILING DATE of this communication app ars on th cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2003* .

2a)☒ This action is **FINAL.** 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed February 24, 2003 in which Claims 1 and 4-5 have been amended, has been place of record in the file as Paper No. 8.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8, 11-12 and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishioka (U.S. Patent No. 6,270,365). With regard to Claim 1, Nishioka discloses a card connector comprising: an insulative housing (1) with a plurality of contacts (2a) for receiving a card (3); a slider (7) slidably mounted in the housing (1) and being movable between an ejection position (Fig. 28) for ejecting the card (3) from the housing (1) and a card receiving position (Fig. 19) for receiving the card (3) in the housing (1); a lock member (8) held by and being movable along with the slider (7) for

engaging a cutout (3b) on a lateral edge of the card (3) to lock the card (3) in the card receiving position (Fig. 19) the lock member (8) comprises a fixed end portion (8c) fixed on the slider (7); a positioning mechanism (6) for positioning the slider (7) in the ejection position (Fig. 28) and the card receiving position (Fig. 19); a free end portion (8a) being supported by contacting a support surface (4) of the housing (1) when in the card receiving position (Fig. 19) and being separated from the support surface (4) when in the ejection position (Fig. 28); and a spring piece (8b) with an engagement protrusion (tip of 8b) for engaging the cutout (3b); wherein when the slider (7) is in the ejection position (Fig. 28), the free end portion (8a) flexes to disengage the engagement with the cutout (3b) of the card (3) by the extraction of the card (3); and when the slider (7) is in the card receiving position (Fig. 19), the free end portion (8a) elastically deforms while contacting the support surface (4) to disengage the engagement with the cutout (3b) by the forced extraction of the card (3). See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 2, Nishioka discloses the free end portion (8a) of the lock member (8) being a tongue (8b) for contacting the support surface (4); the engagement protrusion (tip of 8b) engages with the engagement surface (8a) of the lock member (8); the tongue piece (8b) and the engagement surface (8a) are disposed closer to one side in the width direction of the spring piece (8b); and the engagement protrusion (tip of 8b) elastically deforms in a twisting manner around the fixed end portion (8c) when it receives the forced extraction force to disengage the engagement with the cutout (3b). See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 3, Nishioka discloses the positioning mechanism (6) includes a cam groove (4h) formed on the housing (1) and a cam follower (7g) structured to move in the cam groove (4h) according to the movement of the slider (7). See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 4, Nishioka discloses a card connector comprising: an insulating housing (1) having a plurality of contacts (2a) for receiving a card (3); a slider (7) being movable between card release (Fig. 28) and card engagement positions (Figs. 19-22); a lock member (8) having a fixed end portion (8c) being fixed to the slider (7) and an engagement protrusion (tip of 8b) that engages the card (3); a positioning mechanism (6) that moves the lock member (8) between a card release position (Fig. 28) and a card engagement position (Fig. 19) and secures the lock member (8) in the card engagement position (Fig. 19); and the lock member (8) having a portion that elastically deforms to disengage from the card (3) when the lock member (8) is secured in the card engagement position (Fig. 19) and the card (3) is forcibly extracted. See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 5, Nishioka discloses the lock member (8) including a free end portion (8c) that moves away form the card (3) to disengage the engagement protrusion (tip of 8b) from the card (3) when the lock member (8) is in the card release position (Fig. 28). See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 6, Nishioka discloses the housing (1) including a support surface (4) that supports the free end portion (8c) in the card engagement position. See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 7, Nishioka discloses the free end portion (8c) and the engagement protrusion (tip of 8b) being offset in a width direction of the lock member (8). See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 8, Nishioka discloses the slider (7) being attached to the positioning mechanism (6) that moves the lock member (8) between the card release position (Fig. 28) and the card engagement position (Fig. 19). See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 11, Nishioka discloses a compression spring (5) that urges the slider (7) toward the card release position (Fig. 28). See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 12, Nishioka discloses a compression spring (5) that moves the lock member (8) between the card release position (Fig. 28) and the card engagement position (Fig. 19). See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 14, Nishioka discloses tongues (8a) that engage an outer surface of the card (3) to prevent the card (3) from ejecting at an excessive speed. See Figs. 10-13 and 16.

With regard to Claim 15, Nishioka discloses the lock member (8) being formed from a metal plate. See Figs. 6-10, 12-13, and 19-28.

With regard to Claim 16, Nishioka discloses the lock member (8) deforming by twisting to disengage from the card (3). See Figs. 6-10, 12-13, and 19-28.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9-10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishioka (U.S. Patent No. 6,270,365) in view of Obara (U.S. Patent No. 6,071,135). Nishioka discloses the claimed invention except for the positioning mechanism including a cam groove formed on the housing and a cam follower structured to move in the cam groove according to the movement of the slider, the cam groove including a plurality of linear paths and oblique surfaces that guide the cam follower through the linear paths.

Obara discloses a card connector having a positioning mechanism (7) including a cam groove (17) formed on the housing (1) and a cam follower (12) structured to move in the cam groove (17) according to the movement of a slider (4), the cam groove (17) including a plurality of linear paths (Fig. 4) and oblique surfaces (Fig. 4) that guide the cam follower (12) through the linear paths (Fig. 4). See Figs. 1-5(E) and Column 6, Lines 4-16.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the positioning mechanism of Nishioka by including a

cam groove formed on the housing and a cam follower structured to move in the cam groove according to the movement of the slider, the cam groove including a plurality of linear paths and oblique surfaces that guide the cam follower through the linear paths as taught in Obara in order to make the card connector more secure without requiring intermediate members thereby simplifying the structure and lowering the manufacturing costs by decreasing the quantity of parts.

Response to Arguments

6. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Edwin A. Leon
AU 2833

EAL
April 23, 2003

P. AUSTIN BRADLEY
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